

Serial No.: 09/348,354
Docket No.: 4123.2US

Remarks

Applicants respectfully solicit reconsideration of the referenced application in view of the amendments and arguments set forth in the Amendment filed February 28, 2002, and further in view of the amendments set forth in this Supplemental Amendment. Claims 2, 33, 35, 37, 40, 43, and 46 have been amended herein. Applicants' attorney has been in telephonic contact with Examiner Gerald Leffers, Ph.D., to advise that this Supplemental Amendment is forthcoming via facsimile transmission in the hope that this submission might be considered contemporaneously with the Amendment filed February 28, 2002, to avoid any unnecessary consumption of the Examiner's time.

Claim Amendments

1. Claims 2, 33, 35, 37, 40, 43, and 46 have been amended. The claim amendments made in this Supplemental Amendment are intended to clarify claim language and to further distinguish the claimed invention over the cited prior art. More specifically, the amendments made herein clarify that the claimed chimeric fiber proteins comprise a part of a fiber of adenovirus serotype 11, 14, 16, 21, 34, 35, or 50 *fused to* a tail region of a fiber of the same serotype as the penton-base. (See, e.g., Specification, FIG. 7; page 9, lines 22-27; page 14, lines 7-15; page 35, lines 23-27; and page 40, lines 1-5). As noted in the Amendment filed herein on February 28, 2002, this limitation results in improved vector stability as compared to chimeric adenoviruses comprising complete substitutions of fiber proteins because the fiber-penton junction is more stable when the fiber tail region is of the same serotype as the penton-base.

It is respectfully submitted the present amendments distinguish the claimed invention over the cited prior art for the same reasons set forth in the Amendment filed February 28, 2002. It is further respectfully submitted the present amendments neither introduce new matter nor necessitate a new search.

Applicants' Source of Adenovirus Serotypes 50 & 51

2. With respect to the statements in the February 28, 2002, Amendment concerning Applicants' source of their adenovirus serotypes 50 and 51 (Dr. Jan de Jong), it was incorrectly stated that Applicants obtained *all* their adenovirus serotypes from Dr. de Jong.

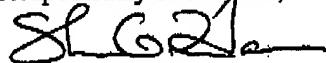
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Actually, Applicants did not receive all adenovirus serotypes, but only the ones that were unpublished at the time and that were isolated by Dr. de Jong, including Ad50 (or "Ad51" as it was known then). The remainder of the discussion relating to the clerical error resulting in Applicants' inadvertent misidentification of serotype 50 as 51 is correct.

Conclusion

Claims 2, 3, and 33 through 48 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. If questions exist after consideration of the foregoing, the Office is kindly requested to contact the applicants' representative at the address or telephone number below.

Respectfully submitted,



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Attachments: Version with Markings to Show Changes Made

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE
37 C.F.R. § 1.121(c)(1)(ii)**

IN THE CLAIMS:

2. (Five Times Amended) A recombinant vector derived from an adenovirus comprising at least one ITR and a packaging signal, the recombinant vector having a first insertion site for a nucleic acid sequence of interest, [and further having] a second insertion site for functionally inserting a gene sequence encoding at least a part of a penton and/or hexon protein of a first [serotype of] adenovirus serotype, and [having] a third insertion site for a gene sequence encoding a part of a fiber protein of a second adenovirus [of a second] serotype, the second adenovirus serotype selected from the group consisting of serotypes 11, 14, 16, 21, 34, 35, and 50, a gene sequence encoding at least a part of a penton and/or hexon protein from the first adenovirus serotype inserted into the second insertion site, a gene sequence encoding the part of a fiber protein of the second adenovirus serotype inserted into the third insertion site, the gene sequence encoding the part of a fiber protein adapted to exhibit a desired tropism to a plurality of target cells in a host and [comprising]fused to a tail region of a fiber of the [first] adenovirus serotype from which the recombinant vector was derived at its N-terminus.

33. (Amended) A chimeric adenovirus comprising:
an adenoviral capsid derived from a first adenovirus serotype; and
a part of an adenoviral fiber derived from a second adenovirus serotype substituted for a corresponding part of a fiber of the capsid derived from the first adenovirus serotype, the second adenovirus serotype selected from the group consisting of serotypes 11, 14, 16, 21, 34, 35, and 50, wherein the part of the adenoviral fiber derived from the second adenovirus serotype [comprising] is fused to a tail region of a fiber of the first adenovirus serotype at its N-terminus.

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35. (Amended) A chimeric adenovirus comprising:
an adenoviral capsid derived from a first adenovirus serotype; and
a part of an adenoviral fiber derived from adenovirus serotype 35 substituted for a corresponding part of a fiber of the capsid derived from the first adenovirus serotype, the part of the adenoviral fiber derived from adenovirus serotype 35 [comprising] fused to a tail region of a fiber of the first adenovirus serotype at its N-terminus.

37. (Amended) A method for producing a chimeric adenoviral particle having a capsid derived from a first adenovirus serotype exhibiting a desired tropism and antigenicity determined by a part of a fiber of a second adenovirus serotype, the second adenovirus serotype selected from the group consisting of serotypes 11, 14, 16, 21, 34, 35, and 50, the method comprising:
providing a recombinant vector derived from the first adenovirus serotype comprising at least one ITR, a packaging signal, an insertion site for a nucleic acid sequence of interest, and an insertion site for a gene sequence encoding [the] a functional part of a fiber protein of the second adenovirus serotype;
inserting into the recombinant vector the gene sequence encoding the functional part of the fiber protein of the second adenovirus serotype, wherein the functional part of the fiber protein [comprising] of the second adenovirus serotype is fused to a tail region of a fiber of the first adenovirus serotype at its N-terminus;
transfecting said vector in a packaging cell; and
producing chimeric adenoviral particles.

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40. (Amended) A method for producing a chimeric adenoviral particle having a capsid derived from a first adenovirus serotype exhibiting a desired tropism and antigenicity determined by a part of a fiber derived from adenovirus serotype 35, the method comprising:

providing a recombinant vector derived from the first adenovirus serotype comprising at least one ITR, a packaging signal, an insertion site for a nucleic acid sequence of interest, and an insertion site for a gene sequence encoding [the] a functional part of the fiber protein of adenovirus serotype 35;

inserting into the vector the gene sequence encoding the functional part of the fiber protein derived from adenovirus serotype 35, wherein the functional part of the fiber protein [comprising] of the second adenovirus serotype is fused to a tail region of a fiber of the first adenovirus serotype at its N-terminus;

transfected said vector in a packaging cell; and

producing chimeric viral particles.

43. (Amended) A recombinant vector derived from a first adenovirus serotype comprising:

at least one ITR;

a packaging signal;

a first insertion site for a nucleic acid sequence of interest;

a second insertion site for functionally inserting a gene sequence encoding a part of a fiber protein of a second adenovirus serotype, the second adenovirus serotype selected from the group consisting of serotypes 11, 14, 16, 21, 34, 35, and 50; and

a gene sequence encoding the part of the fiber protein of the second adenovirus serotype inserted in the second insertion site, the part of the fiber protein of the second adenovirus serotype exhibiting a desired tropism to a plurality of cells in a host and [comprising] fused to a tail region of a fiber of the first adenovirus serotype at its N-terminus.

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46. (Amended) A recombinant vector derived from a first adenovirus serotype comprising:

at least one ITR;

a packaging signal;

a first insertion site for a nucleic acid sequence of interest;

a second insertion site for functionally inserting a gene sequence encoding a part of a fiber protein of adenovirus serotype 35; and

a gene sequence encoding the part of the fiber protein of adenovirus serotype 35 inserted in the second insertion site, the part of the fiber protein of adenovirus serotype 35 exhibiting a desired tropism to a plurality of cells in a host and [comprising]fused to a tail region of a fiber of the first adenovirus serotype at its N-terminus.